

FEATURES

- ◆ 1kVDC Isolation
- ◆ Internal SMD Construction
- ◆ UL94V-0 Package Material
- ◆ Toroidal Magnetics
- ◆ Efficiency to 85%

MODEL SELECTION

A^①05^②05^③N^④X^⑤T^⑥-2W^⑦

- ① Product Series
- ② Input Voltage
- ③ Output Voltage
- ④ No Pin
- ⑤ Fixed Input
- ⑥ SMD Package
- ⑦ Rated Power

APPLICATIONS

Compared to standard 2 Watt packages, space savings of 80% respectively 77% are achieved by these A-NXT-2W&B-NXT-2W SMD Miniature DC/DC Converters. They have been specifically designed for applications where board space is at a premium, since these 2 Watt converters have only a slightly larger foot print than conventional 1 Watt converters.

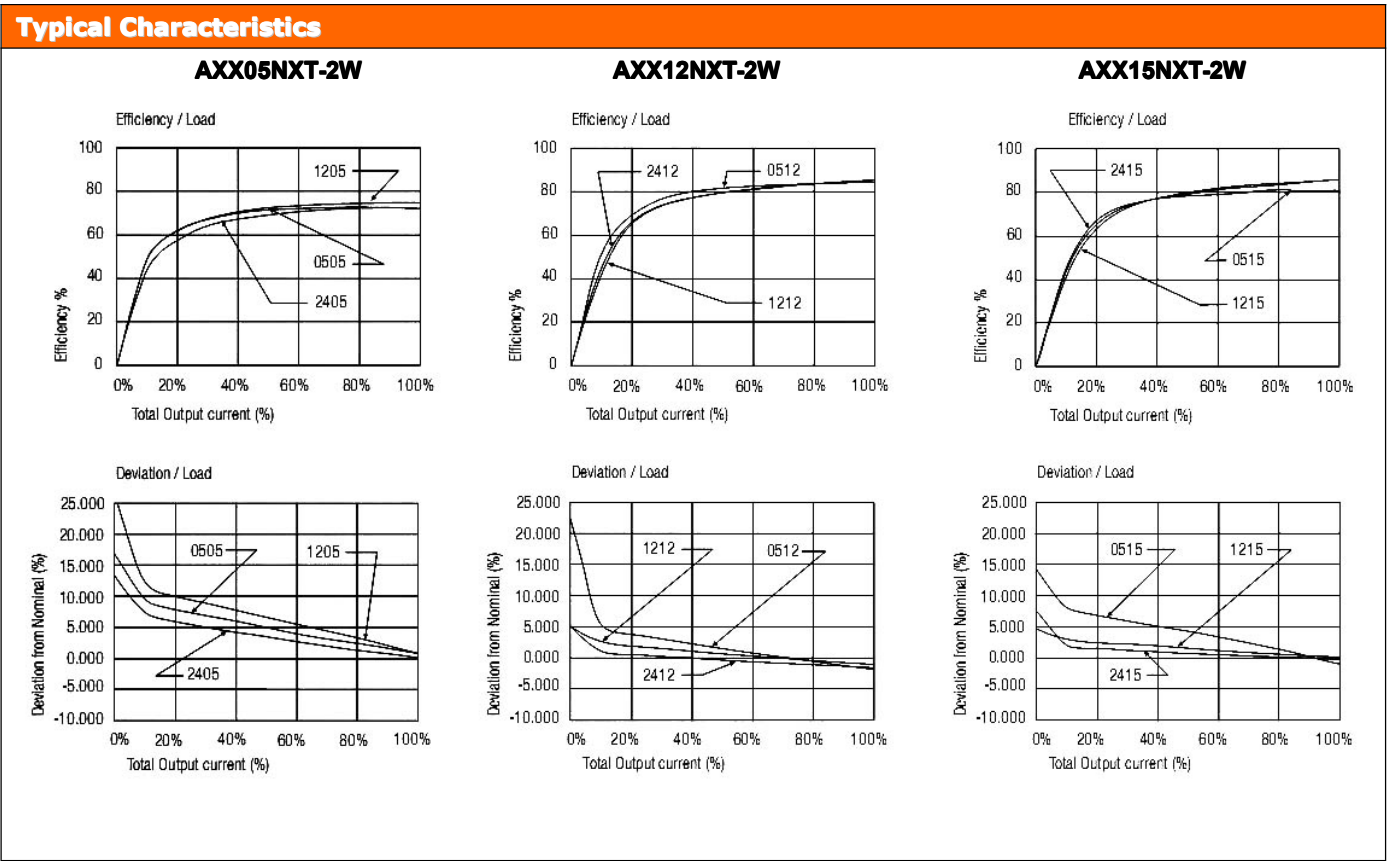
At efficiencies up to 80%, external cooling is not needed, as the full output power is available over the operating temperature range -40°C to +85°C. All converters have an I/O-Isolation of 1kVDC, allowing making them suitable for many applications.



SELECTION GUIDE

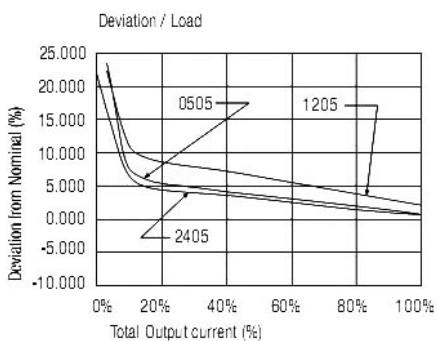
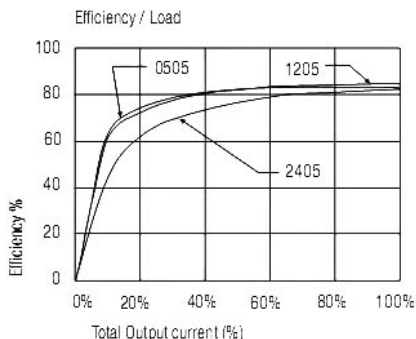
Part Number	Input Voltage (VDC)	Output Voltage (VDC)	Output Current (mA)	Efficiency (%)
B0503NXT-2W	5	3.3	606	70-75
B0903NXT-2W	9	3.3	606	70-75
B1203NXT-2W	12	3.3	606	70-75
B1503NXT-2W	15	3.3	606	70-75
B2403NXT-2W	24	3.3	606	70-75
B0505NXT-2W	5	5	400	80-85
B0905NXT-2W	9	5	400	80-85
B1205NXT-2W	12	5	400	80-85
B1505NXT-2W	15	5	400	80-85
B2405NXT-2W	24	5	400	80-85
B0509NXT-2W	5	9	222	80-85
B0909NXT-2W	9	9	222	80-85
B1209NXT-2W	12	9	222	80-85
B1509NXT-2W	15	9	222	80-85
B2409NXT-2W	24	9	222	80-85
B0512NXT-2W	5	12	167	80-85
B0912NXT-2W	9	12	167	80-85
B1212NXT-2W	12	12	167	80-85
B1512NXT-2W	15	12	167	80-85
B2412NXT-2W	24	12	167	80-85
B0515NXT-2W	5	15	133	80-85
B0915NXT-2W	9	15	133	80-85
B1215NXT-2W	12	15	133	80-85
B1515NXT-2W	15	15	133	80-85
B2415NXT-2W	24	15	133	80-85
B0524NXT-2W	5	24	83	80-85
B0924NXT-2W	9	24	83	80-85
B1224NXT-2W	12	24	83	80-85
B1524NXT-2W	15	24	83	80-85
B2424NXT-2W	24	24	83	80-85
A0505NXT-2W	5	+5	+200	70-75
A0905NXT-2W	9	+5	+200	70-75
A1205NXT-2W	12	+5	+200	70-75
A1505NXT-2W	15	+5	+200	70-75
A2405NXT-2W	24	+5	+200	70-75
A0509NXT-2W	5	+9	+111	75-78
A0909NXT-2W	9	+9	+111	75-78
A1209NXT-2W	12	+9	+111	75-78
A1509NXT-2W	15	+9	+111	75-78
A2409NXT-2W	24	+9	+111	75-78
A0512NXT-2W	5	+12	+83	75-83
A0912NXT-2W	9	+12	+83	75-83
A1212NXT-2W	12	+12	+83	75-83
A1512NXT-2W	15	+12	+83	75-83
A2412NXT-2W	24	+12	+83	75-83
A0515NXT-2W	5	+15	+66	75-85
A0915NXT-2W	9	+15	+66	75-85
A1215NXT-2W	12	+15	+66	75-85
A1515NXT-2W	15	+15	+66	75-85
A2415NXT-2W	24	+15	+66	75-85
A0524NXT-2W	5	+24	+42	78-85
A0924NXT-2W	9	+24	+42	78-85
A1224NXT-2W	12	+24	+42	78-85
A1524NXT-2W	15	+24	+42	78-85
A2424NXT-2W	24	+24	+42	78-85

Specifications (Core Operating Area)		
Input Voltage Range		± 10
Output Voltage Accuracy		± 5
Line Voltage Regulation		1.2%/1% of Vin max.
Load Voltage Regulation (10% to 100% full load)	3.3V output types 5V output type 9V, 12V, 15V, 24V output types	20% max. 15% max. 10% max.
Output Ripple and Noise (20MHz limited)		150mVp-p max.
Operating Frequency		20kHz min. / 50kHz typ. / 85kHz max.
Efficiency at Full Load		70% min. / 80% typ.
No Load Power Consumption	B-NXT-2W typ. A-NXT-2W typ.	124mW min. / 186mW typ. / 250mW max. 159mW min. / 192mW typ. / 240mW max.
Isolation Voltage	(tested for 1 second)	1000VDC min.
Rated Working Voltage	(long term isolation)	see Application Notes
Isolation Capacitance		40pF min. / 115pF max.
Isolation Resistance		10 GΩ min.
Short Circuit Protection		1 Second
Operating Temperature Range (free air convection)		-40°C to +85°C (see Graph)
Storage Temperature Range		-55°C to +125°C
Reflow Temperature ROHS compliant (for more details see Application Notes)		245°C (30 sec) max.
Relative Humidity	MSL Level 1	95% RH
Package Weight	B-NXT-2W types A-NXT-2W types	2.1g 2.5g
MTBF (+25°C) (+85°C)	Detailed Information see Application Notes chapter "MTBF"	using MIL-HDBK 217F using MIL-HDBK 217F 886 x 10 ³ hours 128 x 10 ³ hours

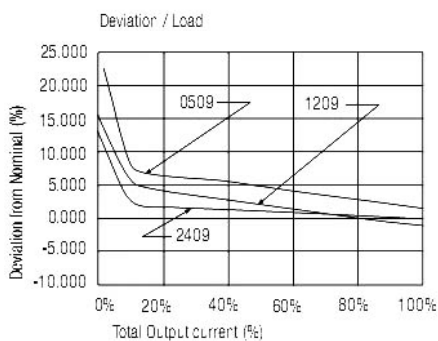
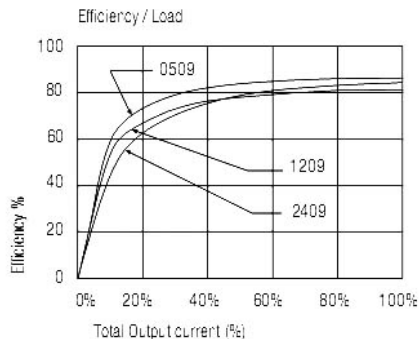


Typical Characteristics

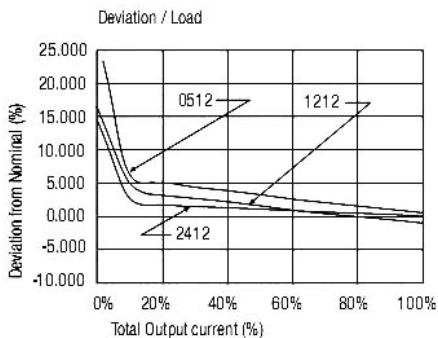
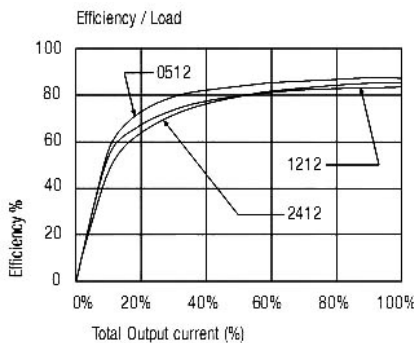
BXX05NXT-2W



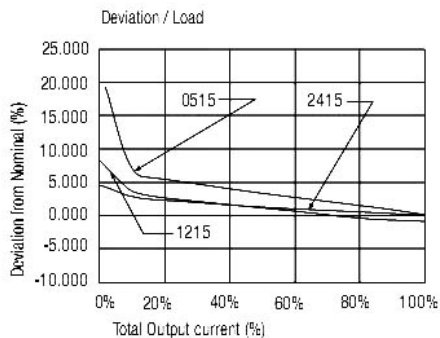
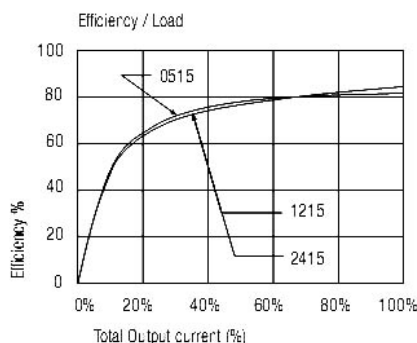
BXX09NXT-2W



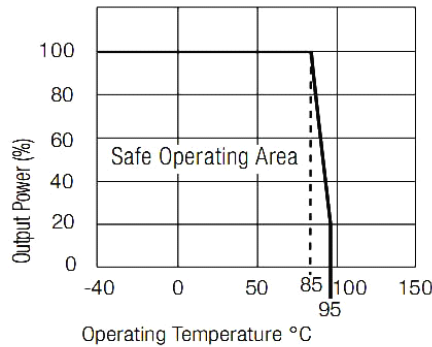
BXX12NXT-2W



BXX15NXT-2W

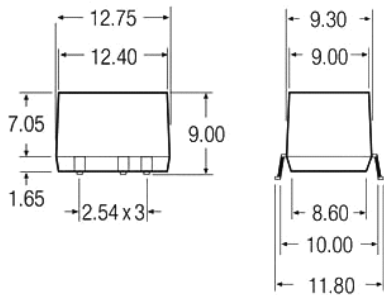


Derating-Graph(Ambient Temperature)

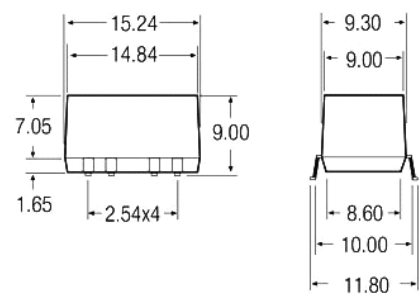


Package Style and Pinning (mm)

8 PIN Single SMD Package



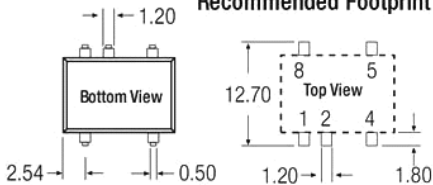
10 PIN Dual SMD Package



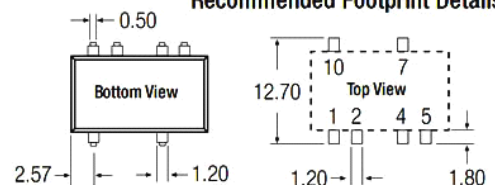
Pin Connections

Pin #	Single	Dual
1	-Vin	-Vin
2	+Vin	+Vin
4	-Vout	Com
5	+Vout	-Vout
7	No Pin	+Vout
8	NC	No Pin
10	No Pin	NC

Recommended Footprint Details



Recommended Footprint Details



NC = No Connection
 XX.X ± 0.5 mm
 XX.XX ± 0.25 mm



RoHS COMPLIANT INFORMATION

This series is compatible with RoHS soldering systems with a peak wave solder temperature of 300°C for 10 seconds. The pin termination finish on the SIP package type is Tin Plate, Hot Dipped over Matte Tin with Nickel Preplate. The DIP types are Matte Tin over Nickel Preplate. Both types in this series are backward compatible with Sn/Pb soldering systems.



REACH COMPLIANT INFORMATION

This series has proven that this product does not contain harmful chemicals, it also has harmful chemical substances through the registration, inspection and approval.